

What to Study

Transmission Genetics Unit

Be able to define and understand the following terms:

- Gene
- Allele
- Dominant
- Recessive
- Homozygous
- Heterozygous
- Genotype
- Phenotype
- Wild type
- Mutant
- Monohybrid cross
- Dihybrid cross
- Incomplete dominance
- Codominance
- Epistasis
- Penetrance
- Expressivity
- Pleiotropy
- Genetic heterogeneity
- Phenocopy
- Barr body
- Epigenic
- Manifesting heterozygote
- Genomic imprinting

Be able to:

- Write genotypes and phenotypes
- Create Punnett Squares
- Predict Genotypic and Phenotypic ratios
- Analyze Pedigrees

For each of the following:

- A single factor cross
- A two factor cross
- Incomplete dominance
- Codominance
- X-linked inheritance

Also be able to explain:

- Gregor Mendel's contributions to the field of genetics
- Mendel's 1st and 2nd Laws (ie-Law of Segregation vs Law of Independent Assortment)
- Autosomal dominant vs Autosomal recessive modes of inheritance (including examples)
- Y-linked vs X-linked traits
- X-linked recessive inheritance vs X-linked dominant inheritance (including examples)
- Sex-limited vs sex-influenced traits (including examples)